

**CLAIMS**

1. A method of conducting commercial transactions in a public information technology network which has an e-service layer of computing capability available to  
5 users of the network, and which acts at least as a directory of available commercial products and/or services accessible via the network, the method including the steps of:  
initiating by means of at least a first processing element within the network, a first commercial transaction seeking a second processing element within the network via whom a commercial object may be obtained;  
10 assigning a reference identifier to the commercial object, the reference identifier being unique within the network; and  
storing the reference identifier in a memory associated with the e-service layer in a manner which enables the reference identifier to be linked to the commercial object to which the reference identifier relates.  
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2. A method according to claim 1 wherein the reference identifier is assigned before initiating the first commercial transaction.
3. A method according to claim 1 wherein the reference identifier is assigned after  
20 initiating the first commercial transaction.
4. A method according to claim 1 wherein the reference identifier is assigned by the first processing element.
- 25 5. A method according to claim 1 wherein the reference identifier is assigned by the second processing element.
6. A method according to claim 4 wherein the reference identifier is passed to the second processing element by the first processing element.  
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7. A method according to claim 1 wherein the second processing element actuates storage of information representative of the commercial object in storage elements which are not accessible via the network without permission of the second processing element, and the reference identifier is linked to the commercial object via said

representative information.

8. A method according to claim 1 wherein the reference identifier is stored in the memory associated with the e-services layer in a manner which enables an address  
5 within the network of the second processing element to be retrieved from the e-service layer using the reference identifier.
9. A method according to claim 1 wherein the step of storing the reference identifier within a memory associated with the e-services layer includes the step of  
10 storing the reference identifier in a memory which is not part of the e-services layer, but which is searchable by the e-services layer in a manner enabling retrieval of details of the second processing element.
10. A method according to claim 9 wherein the memory is provided at least by a  
15 storage element operable by the second processing element.
11. A method according to claim 1 wherein the second processing element is one of a plurality of processing elements which are equivalent *vis a vis* the commercial object.  
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12. A method according to claim 1 wherein the commercial object is represented to a processing element within the network as a combination of information and a further unique reference identifier.
- 25 13. A method according to claim 12 wherein the further unique reference identifier is representative of a further commercial object, forming a subobject of the first-mentioned commercial object.
14. A method according to claim 7 wherein the first and second processing  
30 elements operate on behalf of first and second persons, the second person dealing in commercial objects of the type sought by the first transaction, the method further comprising the step of enabling retrieval from the memory associated with the e-service layer, of details of a second processing element operating on behalf of the second person.

15. A method according to claim 14 wherein the details of the second processing element include an address of the second processing element within the network, by means of which the second processing element may be contacted via the network.

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16. A method according to claim 14 wherein modification of the representative information of the commercial object is possible only by the second processing element, or with permission of the second processing element.

10 17. A method according to claim 16 wherein modification to the representative information by an element other than the second processing element is possible subsequent to an exchange of messages with the second processing element.

18. A method according to claim 16 further comprising the steps of:

15 completing a second transaction involving at least one of the first and second processing elements, the second transaction including the step of concluding a contract relating to the commercial object sought in the first transaction, wherein at least one of the first and second persons are a party to the contract;

20 modifying the memory associated with the e-service layer to enable the reference identifier to be linked to at least an address within the network of a processing element other than the second processing element.

19. A method according to claim 18 further comprising the step of enabling said processing element other than the second processing element to modify the  
25 representative information.

20. A method according to claim 19 wherein the second transaction involves at least the first processing element, and a third processing element operating on behalf of a third person, wherein the parties to the contract are at least the first and third  
30 persons, and subsequent to conclusion of the contract the address of the third processing element is linked to the reference identifier, and the third processing element is able to modify the representative information.

21. A method according to claim 19 wherein the second transaction involves at

least the first and second processing elements, and wherein the parties to the contract are at least the first and second persons and subsequent to conclusion of the contract the address of the first processing element is linked to the reference identifier, and the first processing element is able to modify the representative information.

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22. A method according to claim 19 wherein the second transaction involves at least the second processing element, and a third processing element operating on behalf of a third person, and wherein the parties to the contract are at least the second and third persons, and subsequent to conclusion of the contract the address of the third  
10 processing element is linked to the reference identifier, and the third processing element is able to modify the representative information.

23. A method of conducting commercial transactions in a public information technology network which has an e-service layer of computing capability available to  
15 users of the network, and which acts at least as a directory of available commercial products and/or services accessible via the network, the method including the steps of:

initiating by means of at least a first processing element within the network, a first commercial transaction seeking a second processing element within the network via whom a commercial object may be obtained;  
20 assigning a reference identifier to the commercial object, the reference identifier being unique within the network; and  
storing the reference identifier in a memory associated with the e-service layer in a manner which enables the details of the second processing element to be retrieved from the e-service layer using the reference identifier.

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24. A method according to claim 23 wherein the reference identifier is assigned before initiating the first commercial transaction.

25. A method according to claim 23 wherein the reference identifier is assigned  
30 after initiating the first commercial transaction.

26. A method according to claim 23 wherein the reference identifier is assigned by the first processing element.

27. A method according to claim 23 wherein the reference identifier is assigned by the second processing element.

28. A method according to claim 26 wherein the reference identifier is passed to the  
5 second processing element by the first processing element.

29. A method according to claim 23 wherein the reference identifier is stored in the memory associated with the e-service layer in a manner which enables the reference identifier to be linked to the commercial object to which the reference identifier  
10 relates

30. A method according to claim 29 wherein the second processing element actuates storage of information representative of the commercial object in storage elements which are not accessible via the network, and the reference identifier is  
15 linked to the commercial object via said representative information.

31. A method according to claim 23 wherein the step of storing the reference identifier within a memory associated with the e-services layer includes the step of storing the reference identifier in a memory which is not part of the e-services layer,  
20 but which is searchable by the e-services layer in a manner enabling retrieval of details of the second processing element.

32. A method according to claim 31 wherein the memory is provided at least by a storage element operable by the second processing element.

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33. A method according to claim 23 wherein the second processing element is one of a plurality of processing elements which are equivalent *vis a vis* the commercial object.

30 34. A method according to claim 23 wherein the commercial object is represented to a processing element within the network as a combination of information and a further unique reference identifier.

35. A method according to claim 34 wherein the further unique reference identifier

36. A method according to claim 23 wherein the first and second processing elements operate on behalf of first and second persons, the second person dealing in commercial objects of the type sought by the first transaction.

37. A method according to claim 23 wherein the details of the second processing element include an address of the second processing element within the network, by means of which the second processing element may be contacted via the network.

38. A method according to claim 30 wherein modification of the representative information of the commercial object is possible only by the second processing element, or with permission of the second processing element.

39. A method according to claim 38 wherein modification to the representative information by an element other than the second processing element is possible subsequent to an exchange of messages with the second processing element.

40. A method according to claim 38 further comprising the steps of:  
completing a second transaction involving at least one of the first and second processing elements, the second transaction including the step of concluding a contract relating to the commercial object sought in the first transaction, wherein at least one of the first and second persons are a party to the contract;

modifying the memory associated with the e-service layer to enable the reference identifier to be linked to at least an address within the network of a processing element other than the second processing element.

41. A method according to claim 40 further comprising the step of enabling said processing element other than the second processing element to modify the representative information.

42. A method according to claim 40 wherein the second transaction involves at least the first processing element, and a third processing element operating on behalf

of a third person, wherein the parties to the contract are at least the first and third persons, and subsequent to conclusion of the contract the address of the third processing element is linked to the reference identifier, and the third processing element is able to modify the representative information.

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43. A method according to claim 40 wherein the second transaction involves at least the first and second processing elements, and wherein the parties to the contract are at least the first and second persons and subsequent to conclusion of the contract the address of the first processing element is linked to the reference identifier, and the first processing element is able to modify the representative information.

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44. A method according to claim 40 wherein the second transaction involves at least the second processing element, and a third processing element operating on behalf of a third person, and wherein the parties to the contract are at least the second and third persons, and subsequent to conclusion of the contract the address of the third processing element is linked to the reference identifier, and the third processing element is able to modify the representative information.

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45. A method of conducting a business transaction between first and second persons, the method comprising the steps of:

- enquiring whether the second person is capable of providing a commercial object derived by the first person;
- assigning a unique reference identifier to the commercial object;
- advertising the reference identifier in a publicly available, searchable directory;
- storing information representative of the commercial object in a manner enabling access to the representative information only by the second person, or with permission of the second person; and
- linking the identifier to the representative information, and thereby to the commercial object, so that retrieval of the identifier enables retrieval of the representative information.

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46. A method of conducting a business transaction between first and second persons, the method comprising the steps of:

- enquiring whether the second person is capable of providing a commercial

object derived by the first person;

assigning a unique reference identifier to the commercial object;

advertising the reference identifier in a publicly available, searchable directory;

storing information representative of the commercial object in a manner

- 5 enabling access to the representative information only by the second person, or with permission of the second person; and

in the publicly available directory, linking the identifier to information enabling contact to be established with the second person, so that retrieval of the identifier from the directory enables retrieval of contact information for the second person.

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47. An information technology network comprising at least a group of computing entities having storage and processing elements, computing entities of the group having a service layer of computing capability, wherein selected communications between computing entities of the group pass via the service layer, the service layer

- 15 being adapted to:

retain within the network, a directory of available products and/or services, and addresses within the network of providers of such products or services, the directory beings searchable by any computing entity within the group; and

store, within a memory associated with the service layer, a reference identifier

- 20 which is unique within the network, in a manner which enables the reference identifier to be linked to information representative of a commercial object comprised of one or more of the products or services in the directory.

48. An information technology network made up of at least a group of computing entities having storage and processing elements, computing entities of the group having a service layer of computing capability, wherein selected communications between computing entities of the group pass via the service layer, the service layer being adapted to:

- 25 retain within the network, a directory of available products and/or services, and addresses within the network of providers of such products or services, the directory beings searchable by any computing entity within the group; and

store, within a memory associated with the service layer, a reference identifier which is unique within the network, in a manner which enables the reference identifier to be linked to an address within the network of a computing entity via

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which products or services may be obtained.

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